Current Transducer LA 25-NP/SP14

I_{PN} = 0.25 A

For the electronic measurement of currents : DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

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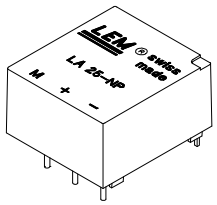

Electrical data

I_{PN}	Primary nominal r.m.s. current		0.25		A
I_P	Primary current, measuring range		0 .. ± 0.36		A
R_M	Measuring resistance		$R_{M\,min}$	$R_{M\,max}$	
	with ± 15 V	@ ± 0.25 A_{max}	100	320	Ω
		@ ± 0.36 A_{max}	100	190	Ω
I_{SN}	Secondary nominal r.m.s. current		25		mA
K_N	Conversion ratio		100 : 1000		
V_C	Supply voltage (± 5 %)		± 15		V
I_C	Current consumption		10 + I_S		mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn		2.5		kV
V_b	R.m.s. rated voltage [1], safe separation		600		V
		basic isolation	1700		V

Accuracy - Dynamic performance data

X	Typical accuracy @ I_{PN} , T_A = 25°C		± 0.5		%
ε_L	Linearity error		< 0.2		%
			Typ	Max	
I_O	Offset current [2] @ I_P = 0, T_A = 25°C		± 0.05	± 0.15	mA
I_{OM}	Residual current [3] @ I_P = 0, after an overload of 3 x I_{PN}		± 0.05	± 0.15	mA
I_{OT}	Thermal drift of I_O	- 10°C .. + 70°C	± 0.10	± 0.35	mA
t_r	Response time [4] @ 90 % of I_{PN}		< 1		µs
f	Frequency bandwidth (- 1 dB)		DC .. 150		kHz

General data

T_A	Ambient operating temperature	- 10 .. + 70		°C
T_S	Ambient storage temperature	- 25 .. + 85		°C
R_P	Primary coil resistance @ T_A = 25°C	< 860		mΩ
R_S	Secondary coil resistance @ T_A = 70°C	110		Ω
L_P	Primary insertion inductance	496		µH
R_{IS}	Isolation resistance @ 500 V, T_A = 25°C	> 1500		MΩ
m	Mass	22		g
	Standards	EN 50178 : 1997		

Notes : [1] Pollution class 2
[2] Measurement carried out after 15 mn functioning
[3] The result of the coercive field of the magnetic circuit
[4] With a di/dt of 100 A/µs.

Features

- Closed loop (compensated) multi-turns current transducer using the Hall effect
- Printed circuit board mounting
- Insulated plastic case recognized according to UL 94-V0.

Special features

- I_{PN} = 0.25 A
- I_P = 0 .. ± 0.36 A
- K_N = 100 : 1000
- T_A = - 10°C .. + 70°C.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

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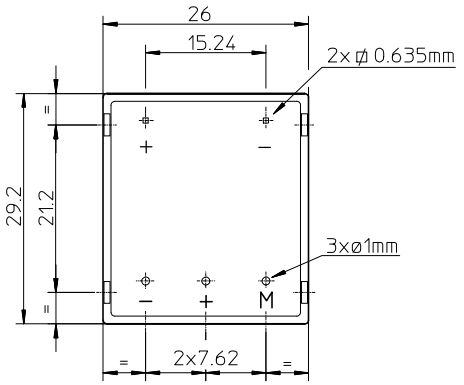
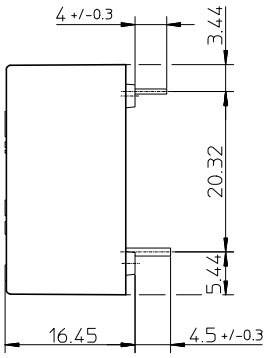
Dimensions LA 25-NP/SP14 (in mm. 1 mm = 0.0394 inch)

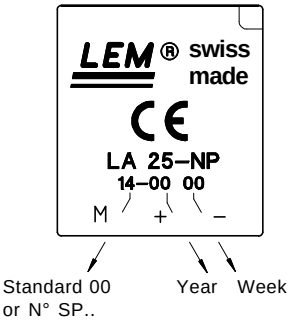
Bottom view

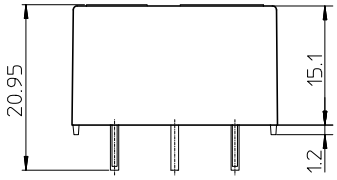


Right view



Top view



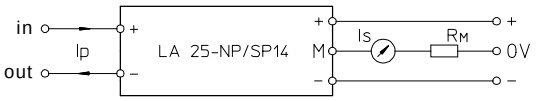


Back view

Secondary terminals

Terminal + : supply voltage + 15 V
Terminal M : measure
Terminal - : supply voltage - 15 V

Connection



Mechanical characteristics

- General tolerance ± 0.2 mm
- Fastening & connection of primary 2 pins 0.635 x 0.635 mm
- Fastening & connection of secondary 3 pins ∅ 1 mm
- Recommended PCB hole 1.2 mm

Remark

- I_S is positive when I_P flows from terminal + to terminal -.